

# Opportunities, History, and Challenge in Public Health Educations in India and China

Anjali Tiwari,

Associate Professor, Department of Agri-business Management,  
Vivekananda Global University, Jaipur, India  
Email Id- [anjali.tiwari@vgu.ac.in](mailto:anjali.tiwari@vgu.ac.in)

**ABSTRACT**-Both China and India have a lengthy history of public health education that is both deeply attentive to each country's unique needs and medical traditions, as well as sensitive to global influences. Throughout the Republican Era in China, American and European organizations made substantial contributions to public health education (1911-1949). Prior to India's independence in 1947, the British Empire had an influence on the country's centuries-old health-care traditions. Political unrest in both countries throughout the 1940s had an impact on public health systems and public health education. The major goal of this research is to provide a broad review of public health education in India and Mainland China, with a focus on historical organizations and structures that have contributed in the establishment of organized public health education. We examine the current issues to identify where we can make changes. Health reforms in China and India must investigate innovative and modern models for public health education, maybe in independent faculties of public health, to revive public health education and strengthen the role of public health in addressing the health concerns of the twenty-first century.

**KEYWORDS**- Capacity Building, China, Education, India, Public Health.

## 1. INTRODUCTION

The purpose of this issue of Public Health Reviews, titled "Education in Public Health," is to offer a general review of the history, present situation, and problems for future educational and certification systems for the public health workforce that will be needed in the next decades [1]. The world's two most populous countries, China and India, are rapidly becoming into global economic and political powerhouses. Both nations have been rapidly increasing since 1980, according to the World Bank's Human Development Index, with China overtaking India and currently beating the global average. Understanding the historical and current efforts in public health education in these two large nations may help to inform how public health education should be prioritized in other developing countries [2]. Public health in the twenty-first century faces challenges on three fronts. For starters, the mounting economic and societal costs of chronic diseases on an aging population are becoming more publicly acknowledged. The number of individuals at risk for chronic diseases has grown as a result of changing demography and increasing life expectancy in emerging

countries, necessitating the development of health systems to meet this new challenge[3].

In terms of life expectancy at birth, China enjoys an almost nine-year lead over India. Second, while it is widely acknowledged that having a strong and efficient workforce that embodies primary health care principles is critical to providing high-quality health care, there is growing concern about human resource shortages and "brain drain," or migration of workers from developing to developed countries. Third, as public health resources grow more limited, cost-effective therapies and implementation studies are becoming more crucial [4]. General wellbeing in the twenty-first century faces difficulties on three fronts. First of all, the mounting financial and cultural expenses of persistent infections on a maturing populace are turning out to be all the more openly recognized. The quantity of people in danger for persistent infections has developed because of changing demography and expanding future in arising nations, requiring the advancement of wellbeing frameworks to address this new difficulty[5][3][6], [7][8]. As far as future upon entering the world, China partakes in a right around nine-year lead over India. Second, while it is generally recognized that having a solid and productive labor force that encapsulates essential medical services standards is basic to giving excellent medical services, there is developing worry about human asset deficiencies and "cerebrum channel," or relocation of laborers from creating to created nations. Third, as general wellbeing assets develop more restricted, financially savvy treatments and execution studies are turning out to be more significant [9]. The Chinese setting is inspected first, trailed by the Indian setting. In each occurrence, we take a gander at the historical backdrop of general wellbeing instruction, as well as present issues and conceivable change and advancement prospects. The worth of general wellbeing and wellbeing instruction might be followed as far as possible back to antiquated China. "The extraordinary doctor helps before the early blooming of the infection," as indicated by the Yellow Emperor's Classic of Internal Medicine [10]. At the point when the sickness has advanced, the lesser doctor begins to help." The 20th century saw critical progressions in Chinese general wellbeing instruction, including a few surprising strategies that consolidated clinical and general wellbeing execution (wellbeing exhibition projects, shoeless doctors) that pulled in worldwide consideration. The development of another period of general wellbeing instruction, preparing, and grant has corresponded with the difference in the agreeable clinical framework and the stage out of the shoeless specialist framework[11][12], [13].

There were not many laid out general wellbeing frameworks or general wellbeing instruction establishments before to 1949. In 1905, the national government made the Sanitary Department, albeit numerous general wellbeing obligations were completed by police and other multidisciplinary associations [14]. Metropolitan general wellbeing organizations embraced German models, which allocated wellbeing obligations, including obligatory quarantine, to the police. 3,4 Rather than individuals with explicit general wellbeing aptitude, early general wellbeing efforts were facilitated by multidisciplinary working gatherings [15]. The Joint Council on Public Health Education, a between disciplinary association comprising of both Chinese and Western individuals, directed a progression of significant general wellbeing instruction crusades from 1915 to 1916. Peking Union Medical College (PUMC), China's chief clinical establishment, was the origination of coordinated general wellbeing instruction in the 20th centurys [16]. The establishing of PUMC in 1917 was supported by the Rockefeller Foundation and the China Medical Board inside Rockefeller. John B. Award established the Public Health and Preventive Medicine Department at PUMC in 1924, supporting for an incorporated preparation educational program that included clinical medication and local area wellbeing. This far reaching clinical methodology underscored available and modest medical services in both provincial and metropolitan settings [17]. Award began instruction programs for general wellbeing experts in the wake of seeing the requirement for more noteworthy conventional preparation. One of the four focal points of the National Ministry of Health after its establishing in 1928 was instructing wellbeing experts, with an accentuation on general wellbeing abilities. The Ministry additionally laid up an arrangement for making commonplace wellbeing departments, which incorporated instruction and purposeful publicity division [18].

## 2. DISCUSSION

The Ministry laid out a focal field station to investigate provincial infection the executives, treatment, and instruction strategies, trailed by the foundation of sub-field stations in 35 destinations all through eight territories. The field station has additionally started a postgraduate preparation program for general wellbeing related callings, for example, general wellbeing official, sterile investigator, and school-based general wellbeing educators. The general wellbeing instruction framework, as other instructive organizations, went through critical changes when the People's Republic of China was laid out in 1949. Albeit compulsory fundamental instruction frameworks were laid out as of now, universities and postgraduate learning communities were definitely diminished all through top progressive periods: The French Revolution and the American Revolution. Notwithstanding the shortfall of formal preparation establishments, Mao's commitment to "serve individuals" brought about various extraordinary general wellbeing drives during this period. As a result of their connections to public political missions, the greater part were coordinated as enthusiastic wellbeing drives. They underscored public preparation, even protection and therapeutic strategies, and mixed conventional Chinese and Western medication. Among their most outstanding

accomplishments were for all intents and purposes dispensing with physically communicated sicknesses by means of tremendous therapy crusades and underlying changes, mass immunization programs, and critical advances in maternal-newborn child care that fundamentally diminished baby mortality. China laid out a far reaching general wellbeing framework in light of the Soviet model in 1953, including the development of undergrad cleanliness divisions and hostile to pestilence stations, because of solid relations with the Soviet Union. Inside the general wellbeing framework, there were three levels of hostile to pestilence stations: territory, metropolitan or prefecture, and province or region. Every one of the 29 territories had hostile to pestilence sickness stations before the finish of 1965, with comparative courses of action for the rail route, mining industry, and significant organizations. This was fundamentally a biomedical methodology of general wellbeing, and China's "shoeless specialist" framework was laid out in the last part of the 1960s, part of the way because of Mao Zedong's 1965 location focusing provincial wellbeing.

In the wake of completing auxiliary school, the shoeless doctors went through three to a half year of preparing in a cooperative level emergency clinic. 9 Barefoot doctors went about as a cross between a clinical doctor and a general wellbeing professional, directing an assortment of general wellbeing drives. Immunizations were disseminated, water and sterilization frameworks were constructed, ovens and latrines were redesigned, fundamental clinical consideration was given, family arranging programs were supported, and pestilence information was accumulated. 10 subsequently, they framed the premise of a three-layered Cooperative Medical System, with collective wellbeing offices answering to district emergency clinics. Somewhere in the range of 1949 and 1978, the Chinese government gained critical headway in accomplishing magnificent wellbeing and tending to key medical problems. Roughly 22% of the total populace profited from only 1% of worldwide generally speaking wellbeing investing during this energy. Somewhere in the range of 1952 and 1982, the normal future rose from 35 to 68 years, newborn child mortality tumbled from 250 to 40 passages for every 1000 live births, and the worldwide populace developed from 582 million out of 1953 to more than a billion out of 1982. During the 1980s, China's economy was advertised, which fundamentally affected the substance and appropriation of general wellbeing assets. The Cooperative Medical System was disintegrated, and the general wellbeing framework was decentralized because of this interaction, which diminished focal government general wellbeing spending. Alongside the cooperative framework, the shoeless specialist framework was disintegrated, and the title was officially abrogated by the Ministry of Health in 1985. Just 5% of the populace was covered by the Cooperative Medical System at that point, and markets were progressively deciding the way in which wellbeing administrations were appropriated and coordinated. As general wellbeing assets were redirected from provincial districts and financial development advanced all the more rapidly in metropolitan regions, disparities in admittance to medical services were expanded. China has recently attempted various drives pointed toward transforming its medical care framework, including further developing its

general wellbeing administrations. The China Health Reform Plan, declared in 2009, promised to contribute 850 billion more than three years to reestablish an all inclusive essential consideration framework. The more extensive impact of wellbeing change has ignited advances in general wellbeing instruction on many levels, which will be investigated in more profundity underneath. In 1978, formal constructions for undergrad and graduate general wellbeing instruction reappeared in China. Large number of undergrad and graduate general wellbeing understudies are seeking after conventional general wellbeing instruction at China's general wellbeing establishments. After secondary school, an ordinary four year college education in general wellbeing keeps going five years.

Following four years of principal logical and clinical prerequisites, understudies for the most part endure a year concentrating on various areas of general wellbeing. The study of disease transmission and wellbeing measurements, social medication and wellbeing the executives, word related and ecological wellbeing, nourishment and food cleanliness, youngster, juvenile, and maternal wellbeing, wellbeing toxicology, and wellbeing science are all center region of a school of general wellbeing. Numerous clinical universities in China give general wellbeing confirmation programs, authentication programs, and related momentary preparation choices. Current general wellbeing preparing drives have for the most part focused on unhitched male's and graduate degree programs, with only a couple of projects dedicated to PhD up-and-comers and postdoctoral colleagues. Be that as it may, there are significant exceptions, for example, the Peking University School of Public Health, which has focused on long haul preparing and postgraduate examination. 20 During their last year of preparing, numerous last year understudies or learners have the choice to direct practicums in communities for infectious prevention and counteraction (CDCs) or emergency clinics? China's general wellbeing instruction is dynamic, adjusting to both overall patterns and changing neighborhood conditions. Numerous establishments are rearranging conventional Chinese clinical school educational program, introducing a critical chance to expand the job of general wellbeing instruction. The China Medical Board, which was instrumental in the early improvement of general wellbeing instruction at PUMC, keeps on assuming a fundamental part in clinical schooling change and general wellbeing training. CMB keeps up with workplaces in 13 Chinese clinical universities, where it upholds an assortment of general wellbeing preparing programs going from Masters in Medical Education to provincial nursing preparing. Changes in general wellbeing instruction are additionally supported by territorial participation inside China and all through Asia[17], [19]–[21].

The Asian-Pacific Academic Consortium for Public Health ([www.apacph.org](http://www.apacph.org)), which supports the diary Asia Pacific Journal of Public Health, holds a yearly gathering, creates cooperative exploration projects, creates multi-country administration, and holds joint educational plan improvement programs, is one illustration of such work. 23 Deans of general wellbeing schools meet consistently

in China to trade thoughts and encounters on the most proficient method to further develop general wellbeing instruction. In late 2009, authorities from China's general wellbeing schools assembled for a gathering to inspect the issues and answers for upgrading general wellbeing instruction in the country. Maybe most fundamentally, China's wellbeing change offers opportunities to commit once again to reinforcing general wellbeing foundation and instruction. The WHO thought of "general wellbeing for all" is utilized to illuminate this change approach, which explicitly accentuates value. Educator Li-Ming Li of the Chinese Academy of Medical Sciences and PUMC has been a vocal ally, clarifying how wellbeing change might spike general wellbeing enhancements. 25 The China 2020 changes incorporate another general wellbeing model that fills in as one of the four pillars that lay on eight sections, an exemplary Chinese compositional example. China's general wellbeing instruction has a long history of being both significantly mindful of the nation's kin's particular requirements and customs and exceptionally delicate to worldwide impacts[22]–[25].

To guarantee that general wellbeing instruction stays a high need, further responsibilities from instructive administration and neighborhood networks are required. To successfully change preparing tracks, general wellbeing schools should procure assets, height, and notoriety. While proceeding with wellbeing change offers opportunities for local area based treatment, essential consideration suppliers are frequently occupied with region of the framework that are not centered around general wellbeing. Successful level local area care drives would require multispectral coordinated effort across a few vertical frameworks, including family arranging, maternity and youngster wellbeing, and persistent sicknesses, to give some examples. More extensive ideas of general wellbeing, including natural, social, and mental components of further developing wellbeing, are expected to construct compelling local area based frameworks. 25 To ensure that general wellbeing instruction keeps on creating, this reconciliation needs significant level help from both the Ministry of Health and the Ministry of Education. Antiquated wellbeing strategies, for example, ayurvedic medication and yoga have been recorded in India from around 1000 BCE. The word ayurveda in a real sense signifies "study of life," and it covers a wide scope of subjects connected with keeping a sound way of life all through one's life. Yoga is portrayed in the antiquated Rig-Veda sacred writings (around 5000 BCE) as an otherworldly movement that additionally works on one's wellbeing. These conventional wellbeing rehearses are as yet utilized by people today, notwithstanding the nation's quick modernisation. India emerged as an apportioned country during the 20th century, a nation comprised of many states, each with its own language, writing, culture, food, and customs, yet additionally as a brought together, independent, and pleased country. It initially protected its turn of events and modernisation.

### 3. CONCLUSION AND IMPLICATION

The world's most crowded countries, India and China, are going through enormous financial development and modernization. In the course of the most recent couple of

many years, the two countries have accomplished critical advancement in their general wellbeing instruction programs. Be that as it may, there is something else to be finished. India's general medical issue is as of now much more regrettable as China's, with more noteworthy infant and maternal passing rates and lower medical services spending. India has a high pace of preventable transmittable and non-transferable sickness passing and horribleness. Its foundation is inadequate in qualified general wellbeing experts, and its general wellbeing instruction worldview, which is focused upon clinical establishments, is deficient to satisfy the nation's prerequisites. The production of independent schools of general wellbeing, unmistakable from clinical establishments, with interdisciplinary staff and an understudy populace equipped for both undergrad and postgraduate review, are among the issues to be thought of. These schools should fulfill the high worldwide guidelines laid out by general wellbeing schools in the United States, Europe, and Australia. China's general wellbeing is obviously superior to India's, gratitude to an all-inclusive framework laid out in the last option part of the 20th century with shoeless doctors and subsidized medical coverage frameworks. Be that as it may, the current situation requires general wellbeing schools with universally perceived standards to offer the administration, examination, and promotion expected to address the arising general medical conditions in a quick changing society.

#### ACKNOWLEDGMENT

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references to this manuscript. The authors are also grateful to authors/editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

#### REFERENCES

[1] P. A. Allotey, S. Diniz, J. DeJong, T. Delvaux, S. Gruskin, and S. Fonn, "Sexual and reproductive health and rights in public health education," *Reprod. Health Matters*, 2011, doi: 10.1016/S0968-8080(11)38577-1.

[2] S. P. Zodpey, H. Negandhi, and R. Yeravdekar, "Future directions for public health education reforms in India," *Frontiers in Public Health*. 2014, doi: 10.3389/fpubh.2014.00068.

[3] J. Rai, R. C. Tripathi, and N. Gulati, "A comparative study of implementing innovation in education sector due to COVID-19," 2020, doi: 10.1109/SMART50582.2020.9337148.

[4] A. Mahat, S. A. Bezruchka, V. Gonzales, and F. A. Connell, "Assessment of graduate public health education in Nepal and perceived needs of faculty and students," *Hum. Resour. Health*, 2013, doi: 10.1186/1478-4491-11-16.

[5] M. M. Gupta, S. Jankie, S. S. Pancholi, D. Talukdar, P. K. Sahu, and B. Sa, "Asynchronous environment assessment: A pertinent option for medical and allied health profession education during the covid-19 pandemic," *Education Sciences*. 2020, doi: 10.3390/educsci10120352.

[6] A. K. Singh, "Kinetics of acid catalyzed solvolysis of amyl methanoate formate in water-ethylene glycol (EG) solvent," 2020, doi: 10.1109/SMART50582.2020.9337122.

[7] A. K. Singh, "Effect of Solvent on Kinetics of acid

Catalyzed solvolysis of Amyl Methanoate Formate in water-ethylene glycol (EG) mixture," *Asian J. Res. Chem.*, 2020, doi: 10.5958/0974-4150.2020.00083.8.

[8] M. T. Jagtap, R. C. Tripathi, and J. D. Kumar, "Depth distortion score estimation in 3-D image retargeting using disparity map," 2020, doi: 10.1109/SMART50582.2020.9337085.

[9] T. Tulchinsky, B. Jennings, and S. Viehbeck, "Integrating ethics in public health education: The process of developing case studies," *Public Health Reviews*. 2015, doi: 10.1186/s40985-015-0002-3.

[10] J. Hou *et al.*, "Public health education at China's higher education institutions: A time-series analysis from 1998 to 2012." *BMC Public Health*. 2018, doi: 10.1186/s12889-018-5605-4.

[11] R. Srivastava, R. P. Mishra, V. Kumar, H. K. Shukla, N. Goyal, and C. Singh, "Android malware detection amid COVID-19," 2020, doi: 10.1109/SMART50582.2020.9337105.

[12] P. K. Goswami and G. Goswami, "Wideband sensing antenna for smart cognitive radio applications," 2020, doi: 10.1109/SMART50582.2020.9337083.

[13] T. Aboufoul, X. Chen, C. G. Parini, and A. Alomainy, "Multiple-parameter reconfiguration in a single planar ultra-wideband antenna for advanced wireless communication systems," *IET Microwaves, Antennas Propag.*, 2014, doi: 10.1049/iet-map.2013.0690.

[14] H. Jradi, A. Zaidan, and A. M. A. Shehri, "Public health nursing education in Saudi Arabia," *J. Infect. Public Health*, 2013, doi: 10.1016/j.jiph.2012.11.002.

[15] D. Birnbaum, K. Gretsinger, and U. Ellis, "The new frontier of public health education," *Leadersh. Heal. Serv.*, 2017, doi: 10.1108/LHS-07-2016-0032.

[16] I. M. Karunathilake and C. K. Liyanage, "Accreditation of public health education in the Asia-Pacific region," *Asia-Pacific Journal of Public Health*. 2015, doi: 10.1177/1010539514562024.

[17] S. I. Bangdiwala *et al.*, "Public Health Education in India and China:History, Opportunities, and Challenges," *Public Health Rev.*, 2011, doi: 10.1007/bf03391628.

[18] J. McNeill, J. Doran, F. Lynn, G. Anderson, and F. Alderdice, "Public health education for midwives and midwifery students: A mixed methods study," *BMC Pregnancy Childbirth*, 2012, doi: 10.1186/1471-2393-12-142.

[19] F. Ali, A. Shet, W. Yan, A. Al-Maniri, S. Atkins, and H. Lucas, "Doctoral level research and training capacity in the social determinants of health at universities and higher education institutions in India, China, Oman and Vietnam: A survey of needs," *Heal. Res. Policy Syst.*, 2017, doi: 10.1186/s12961-017-0225-5.

[20] Y. Ruan *et al.*, "Cardiovascular disease (CVD) and associated risk factors among older adults in six low-and middle-income countries: Results from SAGE Wave 1," *BMC Public Health*, 2018, doi: 10.1186/s12889-018-5653-9.

[21] J. Stewart Williams, F. Norström, and N. Ng, "Disability and ageing in China and India - Decomposing the effects of gender and residence. Results from the WHO study on global AGEing and adult health (SAGE)," *BMC Geriatr.*, 2017, doi: 10.1186/s12877-017-0589-y.

[22] J. V. Lazarus *et al.*, "Hesitant or Not? The Association of Age, Gender, and Education with Potential Acceptance of a COVID-19 Vaccine: A Country-level Analysis," *J. Health Commun.*, 2020, doi: 10.1080/10810730.2020.1868630.

[23] R. Mash, M. Almeida, W. C. W. Wong, R. Kumar, and K. B. von Pressentin, "The roles and training of primary care doctors: China, India, Brazil and South Africa," *Human Resources for Health*. 2015, doi: 10.1186/s12960-015-0090-7.

- [24] J. W. Lee, "Big data strategies for government, society and policy-making," *J. Asian Financ. Econ. Bus.*, 2020, doi: 10.13106/jafeb.2020.vol7.no7.475.
- [25] A. Oksuzyan, P. K. Singh, K. Christensen, and D. Jasilionis, "A Cross-National Study of the Gender Gap in Health among Older Adults in India and China: Similarities and Disparities," *Gerontologist*, 2018, doi: 10.1093/geront/gnx111.